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Introduction: XRCC3 gene is one of DNA repair genes which its product functions in homologous recombination to maintain chromosome stability by repairing DNA damage. Polymorphisms in this gene may alter the capacity of cellular genome maintenance and subsequent cancer transformation. Differentiated thyroid cancer (DTC) is the most prevalent endocrine system neoplasm. Association of polymorphisms in few DNA repair pathway genes with DTC has been demonstrated.

Material and methods: XRCC3 gene polymorphism (rs861539) was analyzed in 161 DTC patients and 182 cancer free individuals in a case–control study using PCR-RFLP method. The frequencies of this single nucleotide polymorphism (SNP) in case and control groups were compared. Also, risk ratio estimation for developing DTC in individuals harboring Thr241Met SNP was done by multivariate logistic regression analysis.

Results: Dichotomized genotypes into those with and without the 241Met allele showed 241Met allele is associated with 1.37 increase risk of DTC ($p = 0.06$).

Conclusions: The results supported that allele 241Met in XRCC3 gene may increase the risk of DTC.

Keywords: DTC, DNA repair gene, Polymorphism

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Poster – [A-10-634-2]

The role of antibodies in preventing infection of candidiasis in patients with leukemia and lymphoma

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Introduction: Candidiasis is one of the most common and important opportunistic fungal infections, some of predisposing factors such as a haematologic and serological disorders like leukemia and lymphoma are involved in its creation. Because humoral immune activity are effective in the prevention of many bacterial infections and some fungal infections such as candidiasis, we evaluated and compared the role and effect of IgG, IgA, and IgM in two groups.

Methods: Case group consisted of 50 leukemia and lymphoma patients that were incurred to candidiasis also. The control group included patients who had been suffering from leukemia and lymphoma, but not candidiasis The mean of antibody in serum were measured and compared by immunodiffusion method. T test was used for comparison of two groups. The results of this study showed that there was a significant decrease in the mean of IgG in patients group compared to those of IgG in the control group ($p < 0.05$). But there was no significant difference in the mean of IgA and IgM between case group and control group. Therefore reducing the mean serum IgG antibodies in patients with leukemia and lymphoma could effect in cause of candidiasis partly.

Keywords: Antibody, candidiasis, leukemia, lymphoma, IgG, IgA, IgM

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Poster – [A-10-647-1]

The correlation between MGMT gene methylation, MGMT protein expression and p53 mutation in glioblastoma

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Introduction: Glioblastoma Multiforme (GBM) is the most common and the most aggressive brain tumor of glial origin. O6-methylguanine DNA Methyl Transferase (MGMT) and p53 are both induced by DNA damage and presumably have functional interactions as well. Assessment of relationship between the expression of these proteins helps in portraying new markers for GBM chemoresistance assessment.

Methods: 50 pathologically-proven GBM samples were analyzed by Methylation-Specific Polymerase Chain Reaction assay (MSP) for determination of MGMT methylation status and by immunohistochemistry analysis (IHC) for MGMT and p53 protein expression assessment.

Results: MGMT hypermethylation was detected in 24 of 50 samples (48%). MGMT IHC was negative in 35 patients (70%) and positive in 15 others (30%) and 52% of cases had p53 mutation, predominantly expressed in the nuclei of tumor cells. Our result showed a positive significant association between MGMT methylation and p53 mutation status ($P < 0.05$). Besides, MGMT IHC-negative specimens showed a lower expression p53 which demonstrates the higher mutation rate ($P = 0.03$).

Conclusion: These findings indicated that there is a positive regulatory relationship between MGMT and p53, which is reflected as a tendency of MGMT activity to decline with p53 inactivation. However, we found some cases with silenced MGMT despite wild-type p53. Interestingly, no significant relationship was found between MGMT IHC with MSP results. Possibly, other regulatory mechanisms come into action for MGMT expression and activity.

Keywords: Glioblastoma multiform (GBM), Immunohistochemical, O6-methyguanine methyl transferase (MGMT), p53, MSP

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Evaluation of stress oxidative activity and oxidative DNA damage of saliva in SCC and compared with normal groups

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